## REMARKS/ARGUMENTS

The Office Action dated November 12, 2010 has been carefully reviewed. Reconsideration of the objections and rejections contained therein is respectfully requested in view of the following remarks. Claims 1-31 and 37-42 are pending in the application. Claims 1, 7, 14, 19, 25, 32 and 37-41 are independent claims. Claims 32-36 have been withdrawn.

### Reply to Examiner's Response to Arguments

Since the Examiner has maintained the prior rejections and has provided arguments in support of this position, the Applicants will address the Examiner's response first.

1. Regarding Paragraph #1 from the Examiner's Response to Arguments.

The Examiner's rejection of the claims under 35 U.S.C. §103(a) in view of Lindskog and Kim is based on an allegedly obvious combination of the teachings of Lindskog and Kim. In particular, the allegedly obvious combination of Lindskog and Kim relies upon (i) Lindskog's teachings related to an allocation of sub-codes within a Walsh code tree (ii) in combination with Kim's teachings related to allocation of a reverse-link supplemental channel to a mobile station.

In the 8/20/2010 Amendment, the Applicants argued against the asserted combination of Lindskog and Kim, in part, by pointing out that Kim's supplemental channel appears to require a full-rate Walsh code. When the Applicants made the argument that, in Lindskog, the sub-codes on the Walsh Code tree of FIG. 2 are not configured to permit full-rate transmissions, the Applicants were attempting to show that the sub-codes of Lindskog's Walsh code tree would not be capable of supporting Kim's supplemental channel.

In response to the Applicants' arguments, the Examiner alleges that the Applicants are arguing features not recited in the claims (e.g., see Paragraph #1 of the Response to Arguments section on Page 2 of the 11/12/2010 Final Office Action). However, claim 1 as an example recites "assigning a second sub-code derived from the first code to support a supplemental channel to the second subscriber station". This feature is admittedly absent in Lindskog (e.g., see Page 3 of the 11/12/2010 Final Office Action), and the Applicants have shown that "a second sub-code derived from the first code" in the Lindskog/Kim combination would not be capable of supporting Kim's full-rate supplemental channel.

Accordingly, the Applicants request that the Examiner revisit the Applicants' arguments as articulated in the 8/20/2010 Amendment because the demonstration that (i) Kim's full-rate supplemental channel requires a full-rate Walsh code (ii) in combination with Lindskog's sub-codes in the Walsh-code tree only being able to support fractional-rate Walsh codes supports the Applicants' position that the combination of Lindskog and Kim would not teach "assigning a second sub-code derived from the first code to support a supplemental channel to the second subscriber station" as recited in independent claim 1 and similarly recited in independent claims 14, 19 and 41.

2. Regarding Paragraph #2 from the Examiner's Response to Arguments.

The Examiner also disagrees with the Applicants' position as discussed above because "Kim teaches a base station assigning an orthogonal code to a subscriber station for communication on a supplemental channel" (e.g., see Paragraph #2 of the Response to Arguments section on Page 2 of the 11/12/2010 Final Office Action). Even if true, Kim states "[t]he forward fundamental channel has a data rate of 9.6 Kbps or 14.4 Kbps, however, a variable rate can also be used according to the channel conditions, wherein the variable rate includes a 1/2 rate of 4.8 Kbps or 7.2 Kbps, a 1/4 rate of 2.4 Kbps or 3.6 Kbps, and a 1/8 rate of 1.2 Kbps or 1.8 Kbps", which implies that the 9.6 Kbps or 14.4 Kbps data-rate corresponds to a full-rate. Later, Kim states "[t]he supplemental channel generator 517 has a scheduled data rate of over 9.6 Kbps" (e.g., Col. 6, lines 35-37 of Kim). Thus, the supplemental channels disclosed by Kim require a 9.6+ Kbps data rate, which appears to necessitate the use of a full-rate Walsh code which cannot be supported by the sub-codes within the Walsh code-tree of Lindskog.

The Examiner goes on to state that "Kim discloses and suggests a second subcode derived from a first subcode to support for a supplemental channel to a second subscriber station" (e.g., see Paragraph #2 of the Response to Arguments section on Page 2 of the 11/12/2010 Final Office Action). This conclusion by the Examiner appears to be incorrect. Clearly, Kim discloses the allocation of multiple channels to subscriber stations. However, the data rate requirements of these channels imply the use of separate full-rate Walsh codes. Lindskog is directed to a dynamic allocation of fractional Walsh-codes that do not appear capable of supporting these channels, in particular, the full-rate supplemental channel of Kim upon which the Examiner is attempting to read the claimed "supplemental channel".

3. Regarding Paragraph #3 from the Examiner's Response to Arguments.

Lindskog discloses a general-framework whereby fractional Walsh-codes, or sub-codes, are allocated to subscriber stations when a full-rate Walsh code is not required, which leaves other sub-codes available for allocation to other subscriber stations. The Examiner cites to Scherzer to cure an admitted deficiency of Linskog to disclose building groups of subscriber stations for resource-allocation. The cited section of Scherzer at Col. 9, lines 33-35 describes separating subscriber stations into M groups and only transmitting to one of the M groups at a given time to reduce downlink interference.

Thus, Lindskog shows how leftover sub-codes in a Walsh code tree can be allocated to subscriber stations, and Scherzer shows a general manner in which subscriber stations can be grouped to improve downlink transmission reception. However, these teachings in combination are not sufficient to achieve the limitations recited in claim 7.

The reason Scherzer groups subscriber stations together is to reduce downlink interference. However, claim 7, as an example, is directed to group subscriber stations in relation to a code assignment procedure for supporting communication channels. Scherzer provides no apparent rationale for modifying Lindskog to achieve a group-based sub-code allocation. In Lindskog, sub-codes are assigned to subscriber stations as the sub-codes become available and/or as channel resource requests are received at the base station.

The Applicants submit that a reasonable combination of Lindskog and Scherzer would be to adopt their respective teachings in parallel, such that sub-codes are allocated per Lindskog's teachings and downlink transmissions are improved per Scherzer's teachings. There is no apparent rationale for a Lindskog/Scherzer combination that assigns sub-codes on a group-by-group basis instead of on a mobile-per-mobile basis or request-per-request basis.

Also, the benefits achieved by grouping mobiles together in Scherzer (i.e., reducing interference by only transmitting to one group member at a time) would not be carried over to a sub-code assignment process in Lindskog. The Examiner alleges that this combination of Scherzer with Lindskog would permit "a larger number of subscriber stations to be handled" (e.g., see Page 8 of the 11/12/2010 Final Office Action). However, it is unclear how this would be achieved. In other words, if Lindskog were modified to assign sub-codes based on a subscriber stations' group identification instead of simply based upon requests on an individual

basis, how would allow more subscriber stations to be handled? Again, the alleged benefits of this 'obvious' combination are not supported by the teachings of Lindskog and/or Scherzer.

For example, Scherzer's downlink transmission interference is achieved by virtue of keeping transmissions to some group-members 'silent' while transmitting to another group-member. However, in Lindskog, each assigned sub-code is already orthogonal to each other assigned sub-code. Thus, the interference associated with the assigned sub-codes is maintained by virtue of their orthogonality, not be silencing some group-members for the benefits of other. Again, grouping subscriber stations together during the sub-code assignment procedure of Lindskog would not appear to provide any apparent benefit, and Scherzer's group-based interference-reduction is not particularly relevant to sub-code assignment.

Accordingly, the Applicants respectfully submit that grouping subscriber stations to reduce downlink transmission interference (Scherzer) is insufficient to motivate one of ordinary skill in the art to group subscriber stations together during a sub-code assignment procedure (as in Lindskog).

**SUMMARY**

Since the Examiner has maintained his rejection of claims 1-31 and 37-42 under 35 U.S.C. § 103 as noted above, the Applicants once again traverse these rejections. The Applicants expressly maintain the reasons from the prior responses to clearly indicate on the record that Applicants have not conceded any of the previous positions relative to the maintained rejections. For brevity, the Applicants expressly incorporate the prior arguments presented in the 8/20/2010 response without a literal rendition of those arguments in this response.

For at least the foregoing reasons and the reasons set forth in Applicant's response of 8/20/2010, it is respectfully submitted that claims 1, 7, 14, 19, 25, 32 and 37-41 are distinguishable over the applied art. The remaining dependent claims are allowable at least by virtue of their dependency on the above-identified independent claims. See MPEP § 2143.01. Moreover, these claims recite additional subject matter, which is not suggested by the documents taken either alone or in combination.

## CONCLUSION

In light of the remarks and/or amendments contained herein, the Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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